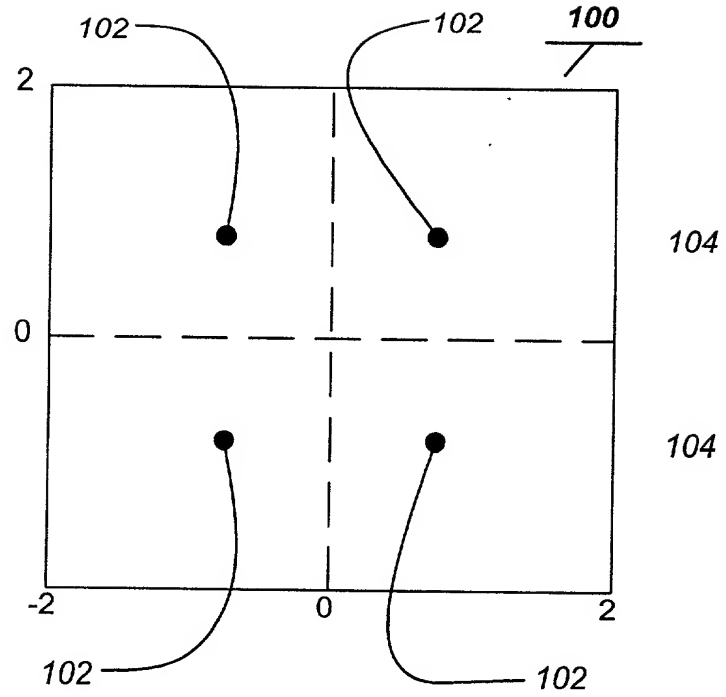

FIG. 1A

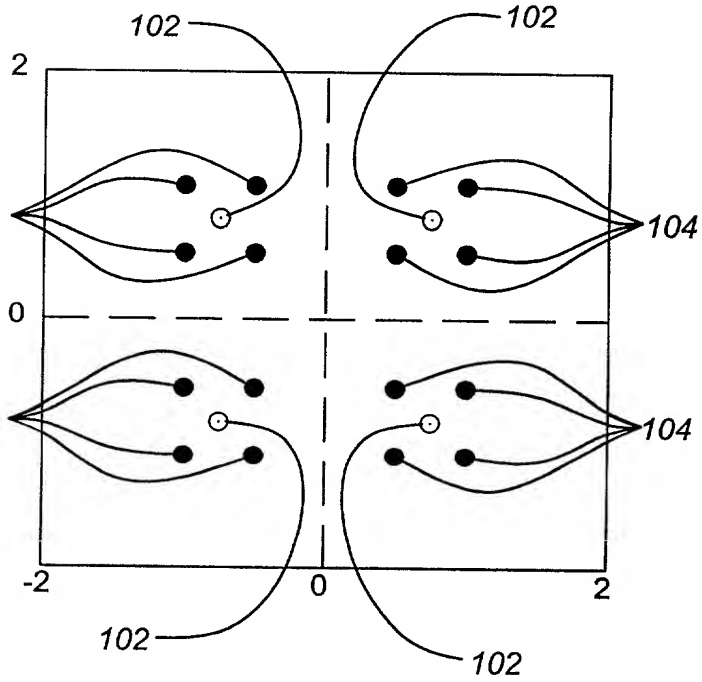

FIG. 1B

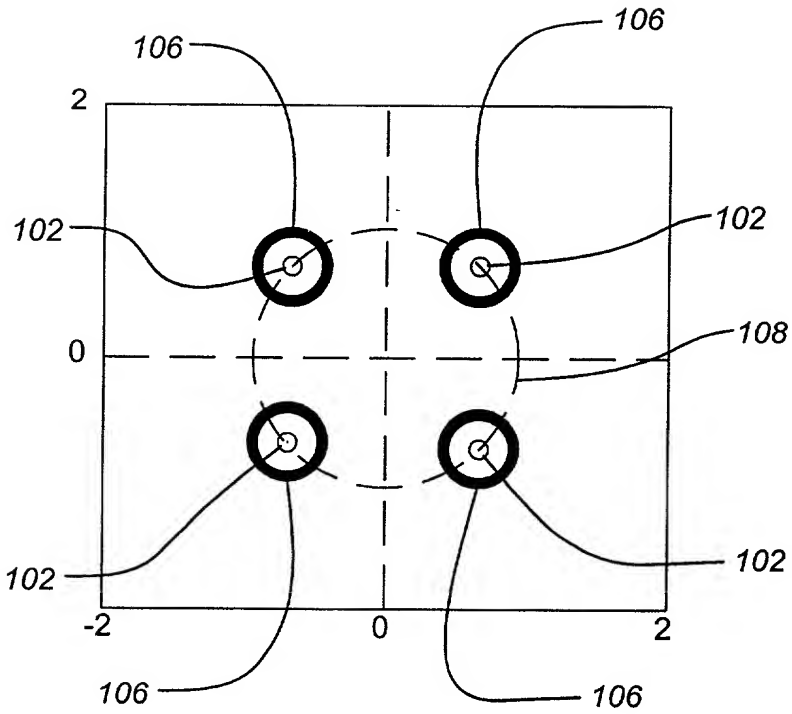

FIG. 1C

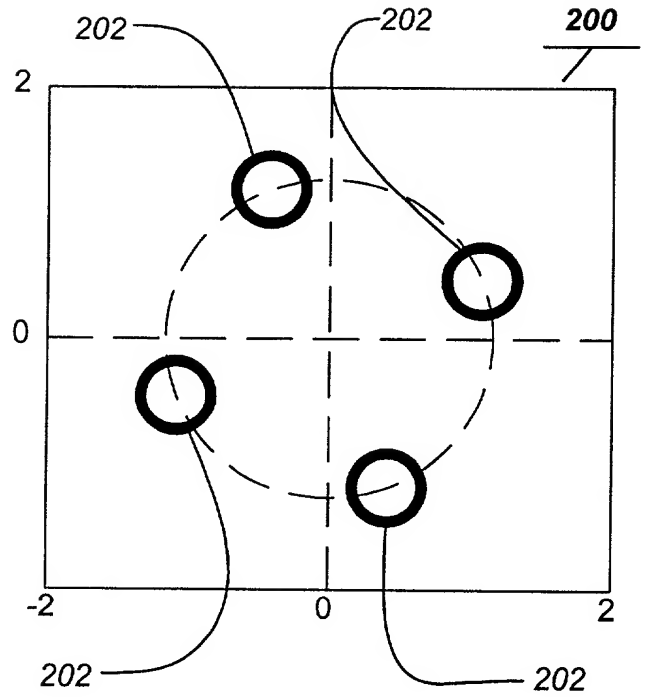

FIG. 2A

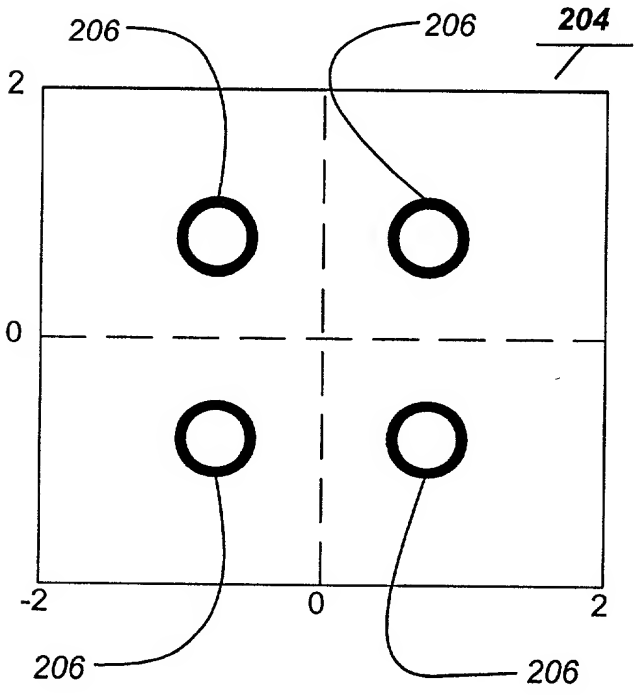

FIG. 2B

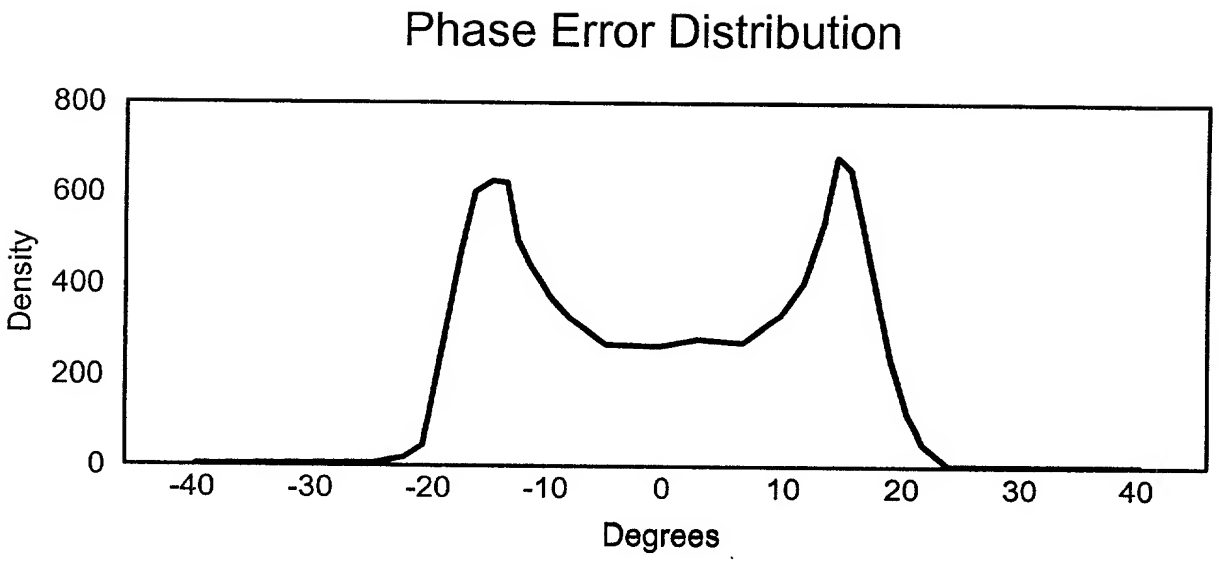
Phase Error Distribution
800
600
400
200
0
Density
-40
-30
-20
-10
0
10
20
30
40
Degrees

FIG. 2C

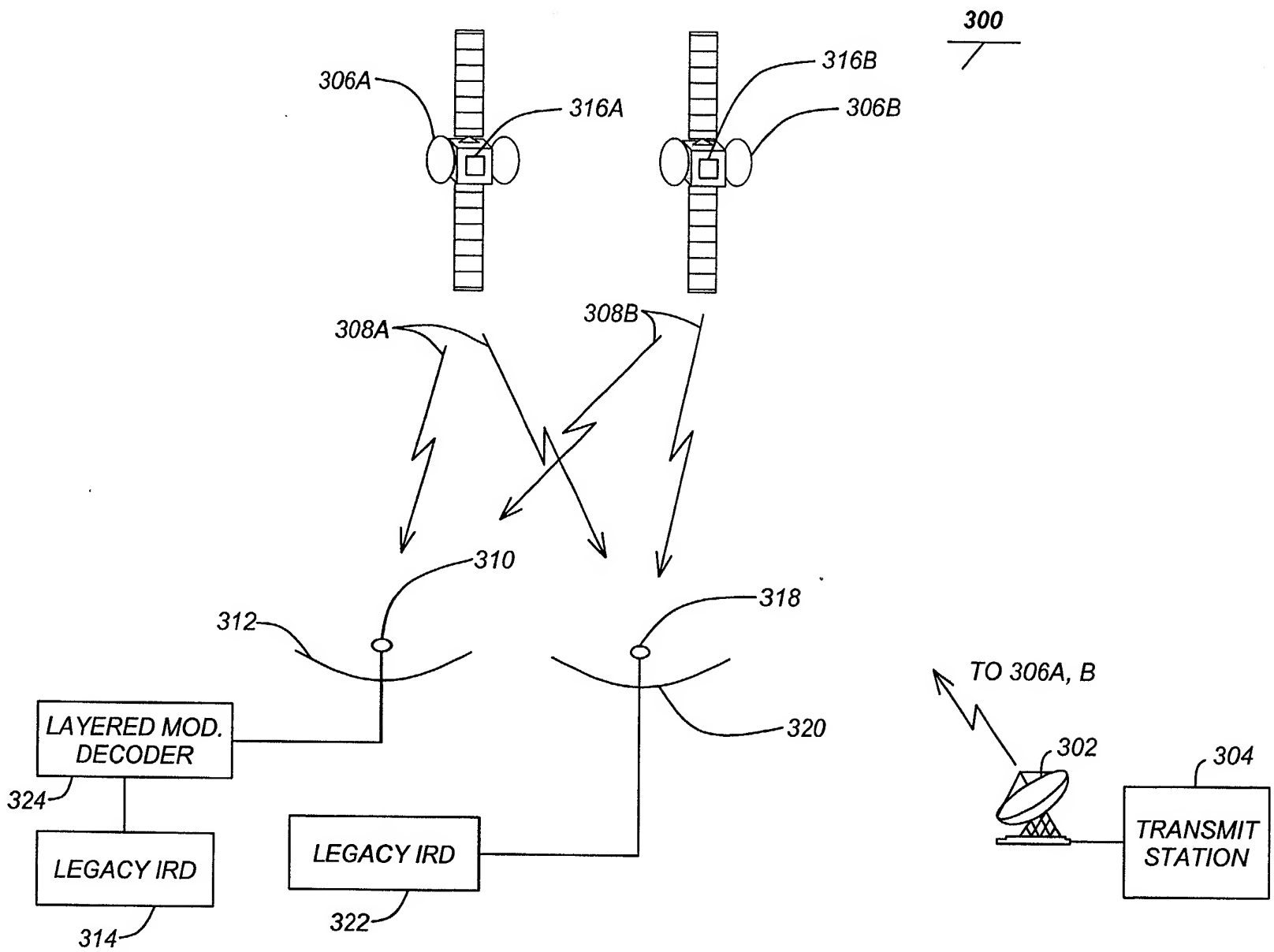
300
306A
316A
316B
306B
308A
308B
310
312
318
320
LAYERED MOD. DECODER
324
LEGACY IRD
314
LEGACY IRD
322
TO 306A, B
302
304
TRANSMIT STATION

FIG. 3

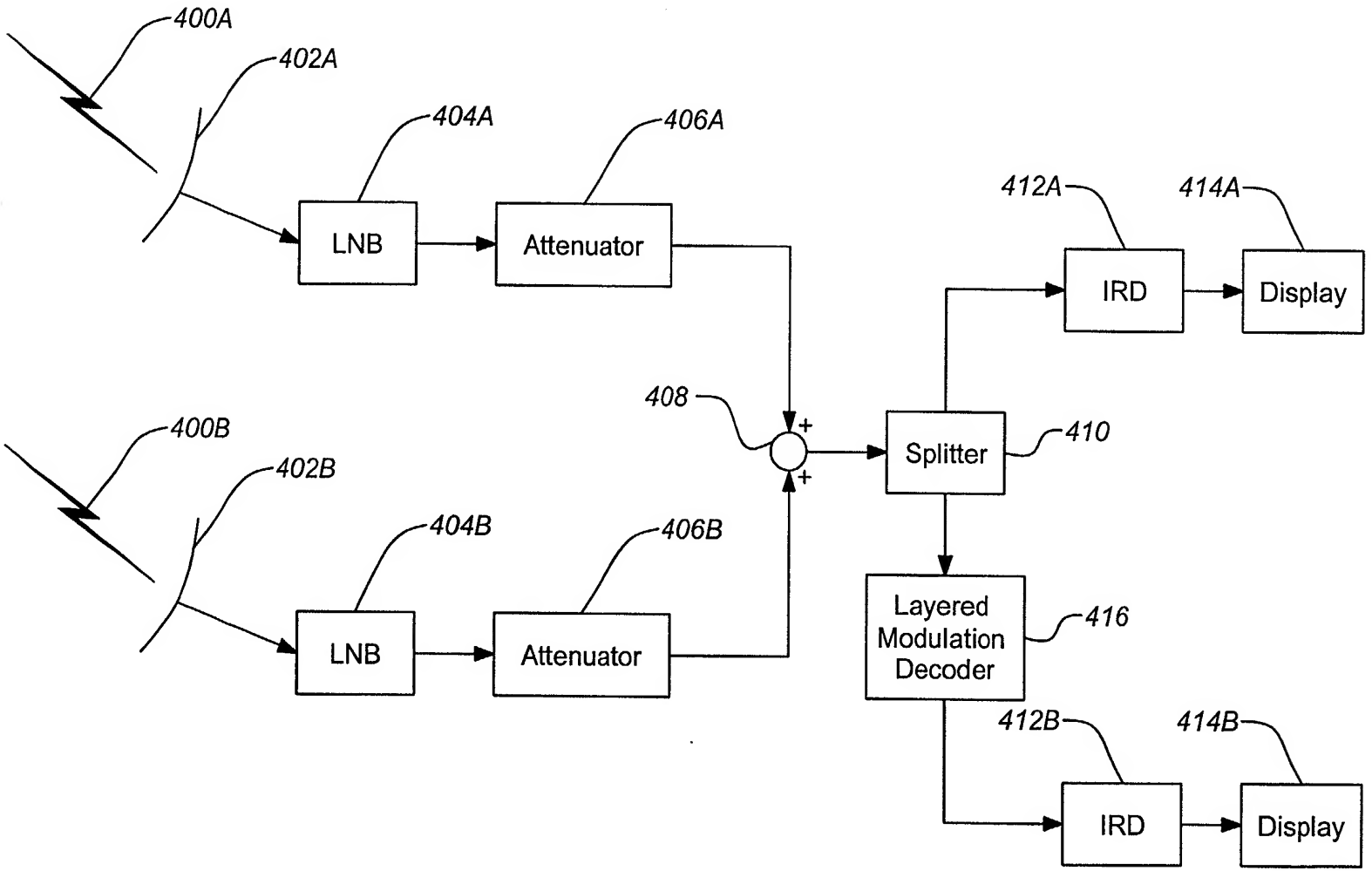
400A
402A
404A
406A
LNB
Attenuator
412A
414A
IRD
Display
408
+
+
400B
402B
404B
406B
LNB
Attenuator
Splitter
410
Layered Modulation Decoder
416
412B
414B
IRD
Display

FIG. 4

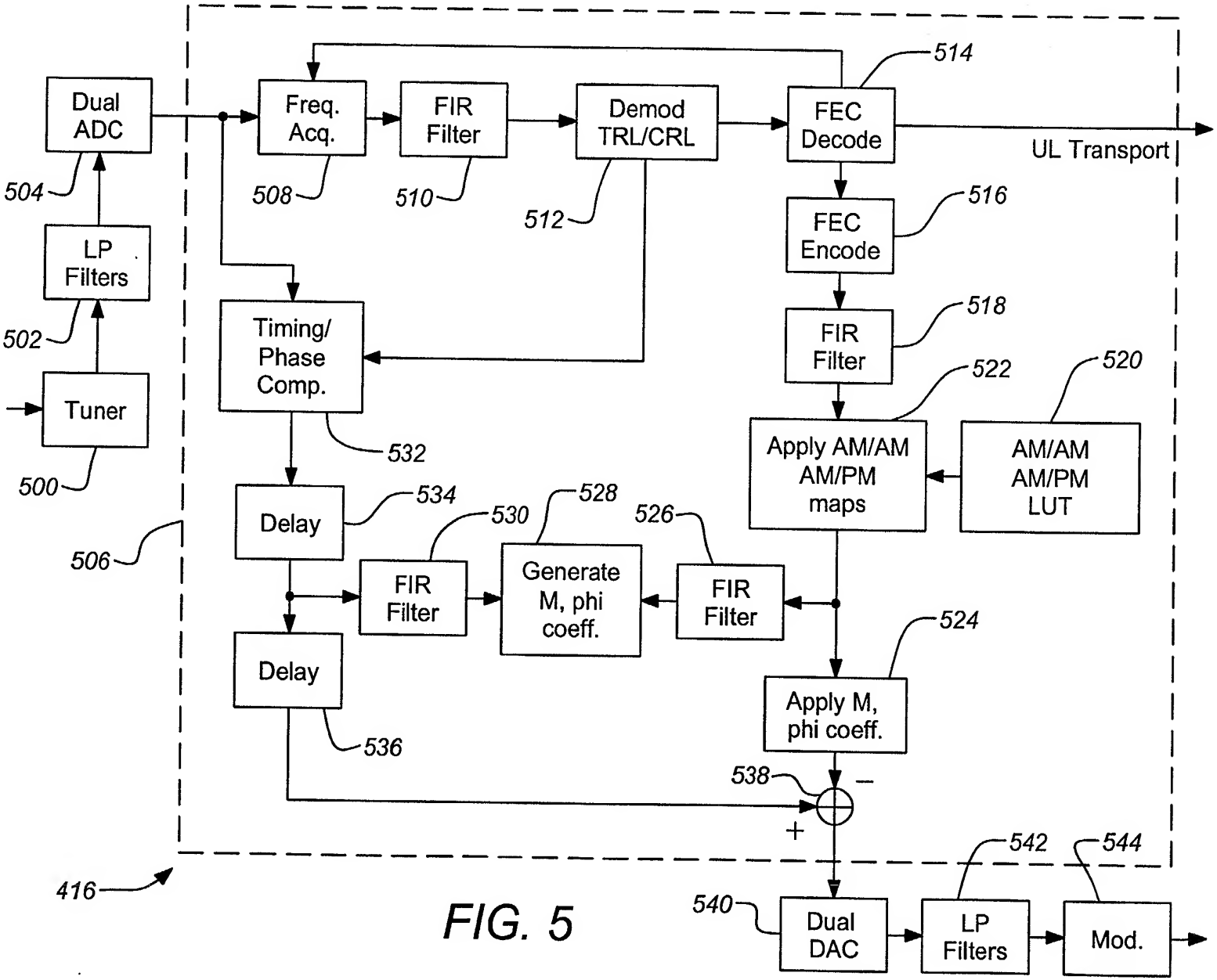
Dual ADC
504
LP Filters
502
Tuner
500
Freq. Acq.
508
FIR Filter
510
Demod TRL/CRL
512
FEC Decode
514
UL Transport
FEC Encode
516
FIR Filter
518
Timing/ Phase Comp.
532
Apply AM/AM AM/PM maps
522
AM/AM AM/PM LUT
520
Delay
534
506
FIR Filter
530
Generate M, phi coeff.
528
FIR Filter
526
Delay
536
Apply M, phi coeff.
524
538
–
+
416
Dual DAC
540
LP Filters
542
Mod.
544

FIG. 5

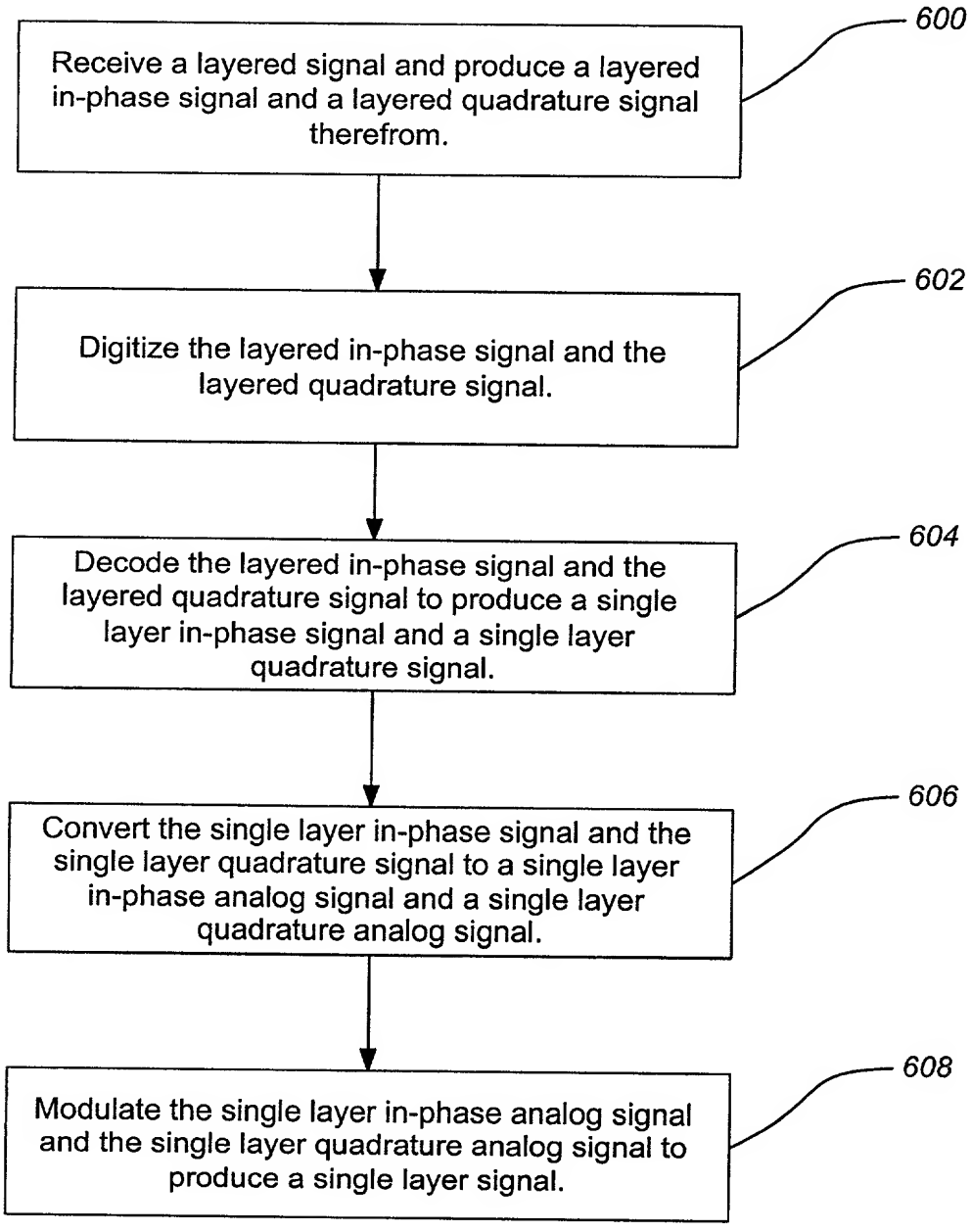
Receive a layered signal and produce a layered in-phase signal and a layered quadrature signal therefrom.
600
Digitize the layered in-phase signal and the layered quadrature signal.
602
Decode the layered in-phase signal and the layered quadrature signal to produce a single layer in-phase signal and a single layer quadrature signal.
604
Convert the single layer in-phase signal and the single layer quadrature signal to a single layer in-phase analog signal and a single layer quadrature analog signal.
606
Modulate the single layer in-phase analog signal and the single layer quadrature analog signal to produce a single layer signal.
608

FIG. 6